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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/729,959

12/09/2003

Osamu Tachizawa

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08/18/2010

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

CHANNAVAJJALA, LAKSHMI SARADA

ART UNIT

PAPER NUMBER

1611

NOTIFICATION DATE

DELIVERY MODE

08/18/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/729,959	Applicant(s) TACHIZAWA ET AL.	
	Examiner Lakshmi S. Channavajjala	Art Unit 1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3,5-16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt of response and declaration dated 10-15-09 is acknowledged.

Claims 4 and 17 have been canceled. Claims 1-3, 5-16 and 18-21 are pending in the instant application.

The following rejection of record has been maintained:

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-3, 5-16 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flick, Ernest (Cosmetics and Toiletry Formulations, submitted on PTO-1449 dated 8-13-08), and further in view of US 5,714,446 to Bartz et al, as evidenced by the translation of the Brief submitted to European Patent Office by Cognis Gmbh and US 5,035,832 to Takamura et al.
3. Alternatively, Claims 1-3, 5-16 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flick, Ernest and US 5,035,832.
4. Flick teaches clear liquid conditioning shampoos and pearlescent shampoos comprising Standapol ES-1, which is sodium laureth sulfate. The translation of a Brief submitted to European Patent Office by Cognis Gmbh describes that ES-1 is made of C12-C14 fatty alcohols with a homolog distribution of ethoxylation of n=0 is 35.43%, n=1 is 21.88, n= 2 is 15.49 and the remaining proportions up to 100% wt are formed by fatty alcohol ether sulfate with 3 or more parts of ethylene oxide. Thus, the percentage distribution of different ethoxylated sulfates fall within the ranges in claims 1 and 6-9. For the

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amounts of the sulfate, the compositions of Flick describe 30% and 10%, which is within the claimed amounts of claims 1, 10 and 11. For the claim 3 cationic polymers, the clear liquid conditioning shampoo on page 598 of Flick shows 2% polyquart H, a PEG-15 tallow polyamine, which is a cationic conditioning polymer see US 4,314,807 (see col. 22, shampoo formulation) and is within the range of claim 16. For claims 2, 12 and 13, Flick teaches cocoamide DEA and Laureth-9 and for the claimed amphoteric surfactants, Flick teaches betaines such as cocamidopropyl betaine, all of which are also described in the instant specification. For the claimed pearlescent agents (5 and 18), Flick teaches glycol stearate and glycolo distearate in the compositions of page 542 shampoo composition, which also contains the above components i.e., ES-1, nonionic and amphoteric surfactants.

5. Flick does not teach silicones in the composition. Bartz teaches hair conditioning shampoo compositions comprising ethoxylated sulfate surfactants and a nonionic silicone conditioning agent (see claims, abstract and examples). The silicone conditioning agent in the composition of '446 is in the same amount as that claimed in the instant application. '446 suggests 0.1% to 10% of silicone (col. 10, l 1-5), which is within the claimed range. Further, all of the exemplified compositions of Bartz teach a combination of ethoxylated surfactant and 2% of the claimed silicone (polydimethylsiloxane).

6. It would have been obvious for one of an ordinary skill in the art at the time of the instant invention was made to employ the silicone conditioning agent of Bartz in the composition of Flick because Bartz teaches that silicones are

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essential to improve the hair conditioning (col. 9, L 50-60) and suggests that the combination of the surfactant, silicone conditioner and a cationic conditioning polymer provides excellent cleaning and also hair conditioning benefit. A skilled artisan would have expected not only the conditioning properties with the inclusion of silicone but also enhanced foam because Takamura teaches that polydimethylsiloxane imparts fine foam and a light, tense, slippery feeling to the skin and hair (abstract, inventive compositions of the reference in table 1). While Bartz does not recognize foam producing properties of the silicones, instant claims broadly state dimethylpolysiloxane without specifying the structure or the characteristics of the polymer. Whereas, the polymer described by Bartz includes the dimethylpolysiloxane compounds described by Takamura, which are taught for foam production by Takamura. Hence, the ability to produce foam is inherent to the compounds of Bartz.

7. Alternatively, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention was made to employ the silicone compounds such as polydimethylsiloxane or silicone derivatives including amino modified silicones taught by Takamura (col. 2-6 and table 1) in the shampoo compositions of Flick, Ernest because Takamura suggests the silicone compounds to produce fine foam that is non-irritating to the skin and imparts a fine, creamy texture to the skin. Further Takamura teaches that the foam producing silicone compositions surfactants for hair or skin cleansing.

8. While, the references above fail to teach the claimed pH ranges, instant claims recite a pH after dilution of the composition by 20 times. Flick teaches

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adjusting pH of the composition to 6.5 +/- 0.5 or 5.5-6.5 (pages 598 and 642) and hence the burden is on applicants to show that the pH of the compositions of Flick, which recite the claimed ingredients, do not possess the claimed pH 6 for claim 19, after diluting it 20 times. Even though Flick fails to teach the pH of 3.5 to 4.5, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention was made to optimize the pH of the compositions of Flick such that the compositions are suitable for use as hair conditioning shampoos.

Response to Arguments

9. Applicant's arguments and the declaration of Mr. Hiroki Mizushima filed 4-26-10 have been fully considered but they are not persuasive.

10. It is argued that Flick fails to teach the combination of claimed surfactants and silicones (new claims). It is argued that notwithstanding that Takamura et al. describes the effect of a silicone on the foaming properties of a non-ionic surfactant and that the art recognizes foaming performance differences between anionic and non-ionic surfactants, applicants respectfully submit that there is no suggestion in the cited references of an enhancement in foaming speed and hair luster and hair manageability by combining a silicone with an ethoxylated sulfated anionic surfactant as claimed.

11. However, the arguments are not persuasive because, instant claims are directed to a composition and require a combination of silicones and ethoxylated sulfate surfactants. Instant claimed ethoxylated surfactant is taught by Flick reference. While Bartz teaches silicones for conditioning effect, Takamura

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teaches that the silicone compounds described in their patent improve the foam and skin feeling over and above the foam produced by the surfactants alone. Thus, the addition of silicone compounds whether as conditioning agents (Bartz) or foam producers (Takamura) would necessarily provide an improved or enhanced foam over and above that produced by the surfactants alone. In response to applicant's argument that the references do not suggest enhanced foaming speed of the claimed surfactants by amino-modified silicones, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In other words, the argued result flows naturally with a combination of amino modified silicone conditioning agents (Bartz or Takamura) and the claimed surfactants (Flick). Furthermore, both Bartz and also Takamura teach silicone compounds in amounts that are within the claimed (new claim 21). Takamura also clearly identifies the foam properties of the claimed silicone compounds.

12. Applicants submit that with respect to the criticality of combining the claimed sulfated surfactant with a silicone compound in terms of foaming speed, the declaration of Mizushima (that incorporates apportion of data from previously filed declaration of Kaharu of 10-15-09) provides evidence of unexpectedness. It is argued that the data demonstrates an enhanced foaming speed resulting from the combination of ethoxylated sulfate and four different amino-modified silicones (evaluation of 18-20) as compared with the same amino-modified silicones with

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an ethoxylated sulfate outside of the claimed distribution (evaluation of 8-15).

Applicants submit that such an enhancement in foaming speed is simply not suggested from the combination of the prior art. Applicants argue that hair luster is a visual evaluation of hair which is dried naturally after shampooing.

Manageability is an evaluation of the cohesiveness of a hair bundle. When the manageability is low, the hair becomes unruly. It is argued that in contrast, Takamura et al. describes that a silicone gives "a superior tensity to the hair and a superb light feeling to the skin", where tensity is a dry hair feeling evaluation and is not suggestive of any of visual or cohesive properties. Takamura et al describes that hair is washed, dried and subjected to sensory evaluation of touch (column 6, lines 65-67). The skin feeling was measured by washing skin, drying and evaluating the skin feeling (column 7, lines 1-2). Thus, it is argued that in spite of a suggestion of an enhancement in foaming properties to a non-ionic surfactant, enhancements to luster and manageability are simply not suggested by Takamura et al.

13. Applicants' argument and the declaration are not persuasive because while the declarations of Kaharu (10-5-09) and Mizushima (4-26-10) show that only a combination of claimed amino modified silicones (0.5%) or dimethylpolysiloxane (0.5% or 1%) with the claimed sulfate surfactant (12%) provides enhanced foam speed, lubricity, luster and manageability, a careful review of the instant specification (table 2, page 18) reveals that any of the sulfates (1, 2 or 3) that are within the scope of the claimed invention are very effective in enhancing the foaming speed, even in the absence of a silicone

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(dimethylpolysiloxane or amino-modified silicone). For instance, all of the compositions in examples 1-8 of Table 2 are equally effective in enhanced foam speed (denoted as A, which is the fastest measured foaming speed according to the description of A of page 15 last line of the instant application). With respect to luster and manageability, compositions without silicones (examples 2, 3 and 20) as well as those with silicones (examples 6 -8) are equally efficient because all of the said compositions render the highest value i.e., 20. Further, example composition 3 is no different from compositions 6 and 7 in terms of foaming speed, lubricity, and luster. Thus, all of the compositions 1-8 of table 2 (with or without silicones in combination with sulfated surfactants of the instant claims) are comparable with the inventive compositions 1-3 of Mizushima Declaration and that of Add Ex 2 of Kaharu declaration, in terms of foaming speed.

Interestingly, even with a combination of two different silicones (examples 6 and 7) the foaming speed, lubricity, luster and manageability was not any higher than the compositions without any silicones (example 3). Hence, it can be concluded from the above sets of results in the two declarations and instant table 2 that the foaming speed, lubricity, luster and manageability are not imparted by silicones and instead by the sulfate surfactants of the claimed invention. Therefore, the argument that enhanced foaming speed, lubricity, luster and manageability observed by applicants are only because of a combination of ethoxylated sulfate and four different amino-modified silicones is not persuasive. While such an enhanced effect is higher with claimed sulfates than with sulfates outside the scope of the instant invention, the question at large is if the foaming speed,

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luster, lubricity and manageability afforded by the claimed composition is unexpected. In light of the above, it is the examiner's position that the argued properties are afforded by 10-15% of claimed sulfate surfactants (the amounts of claimed surfactants employed in the above declarations and instant table 2) and not due to the addition of silicones to the said surfactants. Indeed it is examiner's position that the results are expected from the cited prior art.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S. Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 9.00 AM - 5.30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila G. Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lakshmi S Channavajjala/
Primary Examiner, Art Unit 1611
August 13, 2010